

# Neonic Risk Assessments – Final Bee, Aquatics, & Terrestrial

(Clothianidin, Dinotefuran, Imidacloprid, and Thiamethoxam)

EFED Briefing for OCSPP AA

October 8, 2019

INTERNAL DELIBERATIVE - DO NOT RELEASE

1

# Outline of Presentation

- Background
- Final Bee Risk Assessments
  - Approach for assessing risks to bees
  - New Data/Methodologies
  - Risk conclusions
- Risk conclusions for birds and mammals
- Risk conclusions for aquatic taxa & new comparative analysis
- Conclusions/Next Steps

# What are Neonicotinoids?

- A class of systemic insecticides, first introduced in the U.S. in the 1990s
- All neonics have a mode of action as agonist of the nAChR receptor
- Different classes of nAChR agonists:
  - Nitroguanidine-substituted neonicotinoids includes: imidacloprid, clothianidin, thiamethoxam, and dinotefuran
  - Cyano-substituted neonicotinoids (*e.g.* acetamiprid)
  - Sulfoxaflor is considered its own sub-category (non-neonicotinoid)
- High public interest
  - Large number of studies (open literature and registrant submitted)
  - Incidents (beekills) relating to exposure from seed dust off
  - > 1 million comments received on our preliminary RAs

INTERNAL DELIBERATIVE - DO NOT RELEASE

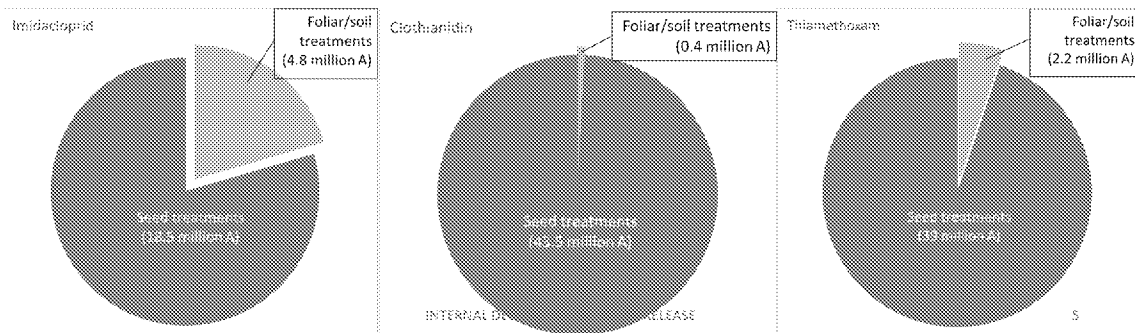
3

# Neonic Registration Review Timing

- Problem Formulations
  - Imidicloprid (IMI) published in 2008
  - Clothianidin (CLOTHI), Thiamethoxam (THIA), Dinotefuran (DINO) published in 2011
- Preliminary Bee Risk Assessments
  - IMI published in 2016, CLOTHI / THIA, DINO published in 2017
- Non-Bee Preliminary Risk Assessments
  - IMI, CLOTHI/THIA, DINO published in 2017
- Final Risk Assessments, Responses to Comments, and Proposed Interim Decision
  - Incorporates public comments (USDA, industry, academia, grower groups) received on the Preliminary Risk Assessments
- Draft Biological Evaluation (BE) for clothi and thia due in June 2021 (Ellis Settlement)

# Neonicotinoid General Use and Usage

- Registered for variety of crops, but primarily (by pounds applied and acreage) as seed treatments for IMI, CLOTHI, THIA
  - Majority of usage is corn and soybean
  - No registered seed treatments for DINO



# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**



# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**



# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**



# **Deliberative Process / Ex. 5**

## Other Recent Regulatory Assessments

- **PMRA** recently (April) released final pollinator assessment and mitigation decisions for IMI, CLO, and THIA
  - Seed treatment conclusions consistent with those of EPA (low pollen/nectar exposure)
  - Cancels or restricts specific application methods and timing of certain use pattern
- **EFSA** has released non-seed treatment Ras (2015) & updated seed treatment RAs (2018)
  - Seed Oral Route: IMI and CLOTHI are low risk from pollen and nectar residues, THIA inconclusive
  - Seed Dust-off: High risk for IMI, CLOTHI and THIA
  - Foliar Uses: High risk to bees for pre-bloom uses and low risk to bees for post-bloom uses

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# EFED Neonicotinoid Chemical Teams

Chemical	EFED Branch	Eco	Fate
Clothianidin	ERB 6	Michael Wagman	Chuck Peck
Thiamethoxam (combined document)	ERB 1	Kris Garber Ryan Mroz	Chris Koper
Imidacloprid	ERB 5	Keith Sappington Meghann Niesen Hannah Yingling	Mohammed Ruhman
Dinotefuran	ERB 3	Elizabeth Donovan	Rochelle Bohaty
Coordination and supporting roles		Colleen Rossmesl Frank Farruggia Monica Wait	

INTERNAL DELIBERATIVE - DO NOT RELEASE

23

# EFED Back-pocket Slides

INTERNAL DELIBERATIVE - DO NOT RELEASE

39

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**



# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**

# **Deliberative Process / Ex. 5**